

Specification Amendments:

Page 8, please replace paragraph [0049] with the following paragraph:

[0049] In a most ~~preferably~~ preferable embodiment, the reductant may form a further reactive or catalytic reagent, allowing or facilitating further reactions to take place. Suitably, the reductant may form a semiconductive material or molecule. Most preferably, a semiconductor crystal may be formed. Such a crystal may be a highly ordered structure known as a lattice. Such a lattice structure may yield a periodic potential throughout the material. There may be more than one semiconductor material species present in the enhanced reactor.

Page 11, please replace paragraph [0068] with the following paragraph:

[0068] More preferably, the enhanced reactor is an alkaline cell which uses a mesh cathode to provide electrons for the reduction of water according to the half cell equation:



said half cell electro-chemical equation being coupled with another half cell reductant for the production of hydrogen. Desirably, the inert mesh cathode consists of platinised titanium to assist anodic corrosion thereby aiding electron transfer from the reductant.

Page 13, please replace paragraph [0075] with the following paragraph:

[0075] The reactive ~~of~~ or catalytic surface may be or include a cathode surface.

Page 13, please replace paragraph [0080] with the following paragraph:

[0080] Figure 1 is a simplified energy band diagram used to describe semiconductors[[],] ; the drawing contains the legend PRIOR ART; and.

Pages 13 and 14, please replace paragraph [0083] with the following paragraph:

[0083] In a preferred embodiment, the cell for carrying out the present invention is an alkaline cell, which uses an inert mesh cathode to provide electrons for the reduction of water according to the half cell equation (equation 1) below:



Page 14, please replace paragraph [0087] with the following paragraph:

[0087] The relevant half cell reactions are:



ADDING:



Page 15, please replace paragraph [0092] with the following paragraph:

[0092] In a most preferably preferable embodiment, a reductant forms a further reactive or catalytic reagent, allowing or facilitating further reactions to take place. Suitably, one or more reductants will form a semiconductive material or molecule.